AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough; and 2. added matter is shown by underlining.

Claims 1-64 (Canceled)

65. (Currently Amended) An in vitro method to produce a population that includes neurons and/or oligodendrocytes, the method comprising:

(a) preparing an in vitro cell culture ~~comprising~~ consisting essentially of astrocytes ~~and a cell~~ derived from a human neural ~~progenitor~~ stem cell;

(b) dissociating and plating the in vitro cell culture; and

(c) maintaining the in vitro cell culture in medium essentially free of serum comprising bFGF for at least one day,

to produce a population of cells that include neurons and/or oligodendrocytes.

66. (Previously Presented) The method of claim 65, further comprising, before (b), maintaining the in vitro cell culture in the presence of bFGF.

67. (Previously Presented) The method of claim 65, wherein (c) maintaining the in vitro cell culture in medium comprising bFGF, is performed for at least 10 days.

68. (Previously Presented) The method of claim 65, wherein (c) maintaining the in vitro cell culture in medium comprising bFGF for at least one day further comprises mechanically disrupting cell clusters.

69. (Previously Presented) The method of claim 65, further comprising, after (c), maintaining the in vitro cell culture in a medium in the absence of bFGF.

70. (Previously Presented) The method of claim 69 wherein the medium comprises DMEM.

71. (Previously Presented) The method of claim 69 wherein the medium comprises F12.

72. (Previously Presented) The method of claim 69 wherein the medium comprises FGF-8.

73. (Previously Presented) The method of claim 69 wherein the medium comprises a member of the group consisting of retinoic acid, dbcAMP, BDNF, and GDNF.

74. (Previously Presented) The method of claim 65, wherein the cells are plated onto a substrate that comprises a member of the group consisting of poly L-lysine, polyornithine, and extracellular matrix.

75. (Previously Presented) The method of claim 65, wherein the concentration of the bFGF is in the range of 0.05 to 1000 ng per ml.

76. (Previously Presented) The method of claim 65, wherein heparin is present with the bFGF.

77. (Currently Amended) The method of claim 65, wherein said method is used as a control step to identify other compounds that may exert a similar transdifferentiation effect on the astrocytes. ~~An in vitro method to screen a compound for transdifferentiation activity, the method comprising:~~

~~exposing the compound to a first in vitro cell culture comprising astrocytes and a cell derived from a human neural progenitor cell, and performing, as a control, steps comprising:~~

~~(a) treating a second in vitro cell culture comprising astrocytes and a cell derived from a human neural progenitor cell with bFGF;~~

~~(b) dissociating and plating the second in vitro cell culture; and~~

~~(c) maintaining the second in vitro cell culture in medium comprising bFGF for at least one day;~~

~~thereby producing a population of cells that include neurons and/or oligodendrocytes.~~

78. (Previously Presented) The method of claim 77, further comprising, before (b), maintaining the in vitro cell culture in the presence of bFGF.

79. (Previously Presented) The method of claim 77, wherein (c) maintaining the in vitro cell culture in medium comprising bFGF, is performed for at least 10 days.

80. (Previously Presented) The method of claim 77, wherein (c) maintaining the in vitro cell culture in medium comprising bFGF for at least one day further comprises mechanically disrupting cell clusters.

81. (Previously Presented) The method of claim 77, further comprising, after (c), maintaining the in vitro cell culture in a medium in the absence of bFGF.

82. (Previously Presented) The method of claim 77 wherein the medium comprises DMEM.

83. (Previously Presented) The method of claim 77 wherein the medium comprises F12.

84. (Previously Presented) The method of claim 77 wherein the medium comprises FGF-8.

85. (Previously Presented) The method of claim 77 wherein the medium comprises a member of the group consisting of retinoic acid, dbcAMP, BDNF, and GDNF.

86. (Previously Presented) The method of claim 85, wherein the cells are plated onto a substrate that comprises a member of the group consisting of poly L-lysine, polyornithine, and extracellular matrix.

87. (Previously Presented) The method of claim 77, wherein the concentration of the bFGF is in the range of 0.05 to 1000 ng per ml.

88. (Previously Presented) The method of claim 77, wherein heparin is present with the bFGF.

89. (Previously Presented) The method of claim 77 wherein the compound comprises at least one neurotrophin.